Information Technology Services

2016 Annual Report

The 2016 Information Technology Services Annual Report

Highlights of the 2015-2016 Academic Year

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Introduction

North Carolina Central University (NCCU) Information Technology Services (ITS) embraces the challenges and opportunities that come with meeting the needs of the 21st Century Scholar. ITS collaborates with departments and divisions developing innovations, providing quality services, keeping a strong focus on ITS security and safety, as well as creating new efficiencies.

This year, ITS realigned three vacant positions to fill important campus needs. These positions are IT Security Specialist, ITS Project Manager, and a Technical Support position focused on Apple products. Each of these new hires provides services to the campus and, within the first year, have already made significant contributions.

The IT Security Specialist position is responsible for maintaining the security of systems, networks and applications at NCCU. This position monitors the NCCU computing environment with a focus on prevention, as well as ensuring that necessary security related incidents are handled in a quick and efficient manner. Previously, incidents were handled by the network and system administrators. With this new position, ITS can further enhance IT Security and begin to focus on IT Security Awareness.

The ITS Project Manager position is responsible for streamlining the project process giving the campus a single location for requests. A comprehensive project management process means project leads and staff members will work together to develop and manage submitted projects that ensures successful and timely completion.

The Technical Support position focuses on Apple products. The expanding popularity of these devices has increased the need for a dedicated specialist. Multiple device usage is becoming more prevalent across the entire campus and ITS is responding to this growing need for support.

Throughout this document, there are examples of ITS teamwork and dedication demonstrated through meeting and exceeding the objectives for this past year. Examples of this include: installing a new communications systems, collaborating with the Library on the new Shepard Library Commons, and working with Financial Aid in the development of an online Financial Aid Application.

Client Services

Consolidate Student Information Technology Resources to a Central Location

ITS worked with the James E. Shepard Library staff to relocate the Client Services team and merge ITS frontline services. This relocation combined the Eagle Technical Assistance Center (ETAC), the Eagle Technical Center (ETC), IT Training, Student Library and Printing Support placing them in a central location on campus. This relocation and merger easily allows students access to additional services and technology offerings by visiting the library as opposed to several different locations. The Techno Lounge provides students a place to study, there is a new a laptop bar with multiple stations, and collaboration rooms to cultivate group study. Additionally, more desktop PCs and Macs have been added to the interlibrary laptop loaner program.

Students are overjoyed by the new space as noted by these comments:

> Family consumer science senior, Nija Parker, said the renovations make the library look inviting. *"I like the atmosphere and the colors," said Parker. "It's a good study atmosphere."*

> Political Science Junior, Amanda Holmes, said*, "I feel that my tuition is actually going to something I can actually see....I love the new renovations."*

> Student, George Ihediwa, stated, *"...it's a nice hub in the middle of campus where students would like to come together and be more studious."*

Enhance Self-Service Capabilities

Client Services implemented services, such as PortalGuard, to assist the Techno Scholar and the campus community. This resource provides campus constituents a secure environment to manage their own passwords. Password resets continue to be one of the most needed services. This self-serve solution allows faculty, staff and students the ability to manage/reset their own network passwords from the convenience of a computer or mobile device 24/7 without contacting the help desk.

Enhance Student Printing Program

The Student Printing Program is a campus-wide solution for all NCCU students that started in the Spring 2016 Semester. The program allows students to print documents in black and white or color from various locations across campus. The annual print credit is $15 for the Fall Semester, $15 for the Spring Semester

and $15 for the Summer Sessions (credits are added only when the student is enrolled in the summer sessions). Once a student depletes their print credit, funds can be added through PaperCut online.

Classroom, Computer and Event Support

The Classroom, Computer and Event Support (CCES) teams have been busy with multiple projects over the past year, all of which are aimed at improving the student learning experience at NCCU. Although there are not a lot of "high profile" projects, the team's impact is felt across all strata of student, faculty and staff interaction.

Technology Enhanced Classroom Support Improvements

After creating a three-tiered technology standard for classrooms (based on size and configuration), CCES can easily outfit these spaces when they become eligible for upgrade, with minimal downtime. As of Fall 2016, CCES has upgraded ten Technology Enhanced Classrooms in the last two years. The impact on instruction is easily gauged by the comments of faculty and students. These rooms include improved technology that also benefits our campus and community in other ways. For example, the new projector standard saves not only in total cost of ownership but supports NCCUs sustainability and efficiency initiatives.

Technicians have been trained and are acquiring test equipment to begin programming the control systems that are part of the classroom standard. This one-time cost will be realized many times over in an average savings of $1800 per new classroom brought online, in addition to in-house reprogramming of systems on-the-fly (instead of paying a vendor cost for a site visit).

> "It looks great. Thank you soooo much"
>
> "The renovations are great, and much appreciated! It's good to have a reliable and clear projected image from the computer, and I also appreciate the desktop camera. The changes to the system have definitely helped to enhance the lecture experience for the students."

Developing Lifecycle Guidelines

CCES established guidelines for a more robust technology Lifecycle Replacement program, for office and classroom computers, as well as for the technology enhanced classrooms. Once implemented, this can enable the team to upgrade to current and remove obsolete technology in a more consistent, timely and efficient manner. Finally, the guidelines can result in a better learning environment for students by improving computing capabilities in learning spaces.

Remote Software Management

ITS is taking advantage of software that enables the remote configuration and management of both Windows and Apple computers. CCES has already effectively managed the campus anti-virus, imaging, and system updates, remotely. This technology gives NCCU technicians the ability to schedule many of the regular updates and installations, providing more hands-on troubleshooting for the campus. Going forward, this technology can also be used to monitor and manage campus hardware and software assets, providing a level of inventory control, and software usage.

Enterprise Information Systems

The Enterprise Information Systems (EIS) team consists of the following areas: EAS – Enterprise Administration Services, EDS – Enterprise Development Services, and ERS – Enterprise Reporting Services. The EIS team is responsible for the overall support of Ellucian Banner, the university Enterprise Resource Planning (ERP) system and ancillaries, university and governmental reporting, and other systems that interface with the Banner ERP. The overall objective of the EIS team is to provide the latest technology in administrative systems in support of faculty, staff, administrators and students, and to ensure that the university's ERP system is consistently online and available, allowing university constituents the ability to conduct day-to-day business with minimum interruption in service.

EIS has been engaged in numerous projects during the 2015-2016 year. The team has collaborated with constituents on campus, peers at other universities, and partners at General Administration to meet the growing needs of the university community. To stay abreast of current technologies, and to provide the best support and service, EIS members serve on committees, attend professional conferences and technical meetings, and participate in training activities. These activities have allowed EIS to grow technical and analytical skills to better serve the needs of customers and the university constituents.

Reducing Maintenance/Downtime

By partnering with NCCU's constituents at MCNC and General Administration for hosted services, EIS completed migration to a new infrastructure at MCNC. This migration reduces the ERP system quarterly 24-hour maintenance window to a quarterly 2-hour maintenance window.

Collaboration with administrative units has resulted in scheduled outages that are fewer in number for application of ERP system releases and upgrades. This facilitates better planning and application of releases and upgrades during non-critical university periods, reducing the impact on administrative units.

Process Improvement Through Automation

Eliminating the need for EIS staff intervention for numerous administrative and system processes reduces the amount of time to complete tasks and the possibility of human error. Processes that have been automated require no manual intervention by EIS staff. The improvement allows employees to work on other initiatives and puts control in the hands of the user where it belongs.

Complete Phase 1 Implementation of UNC General Administration Student DataMart

In collaboration with staff at UNC General Administration, the campus Office of Institutional Research and Evaluation and other university administrative units, Phase I of the Student Data Mart was completed. With the completion of phase I and phase II, UNC General Administration is now able to produce files such as the quarterly student data, grades, and student credit hour, the bi-yearly graduation, the yearly financial aid and space utilization, and student course description table submitted in conjunction with each quarterly student data grades previously generated on the campus.

Reduce Time to Produce Files for Governmental Reporting and Increase Accuracy of Data Submitted

As collaboration continues, parallel processing will not be required for 2015-2016 generation of the student data mart. Data quality review and validation, which is the focus for the years forward, will result in more accurate governmental reporting for the university.

The EIS team has also been engaged in numerous projects throughout the 15-16 year:

- EIS team members, along with other campus constituents, have completed initial WorkFlow training. This system will enable us to assist in the design and implementation of automation within Banner. Once implemented, WorkFlow will increase process efficiency and productivity by triggering notifications, approvals, and other processes that were previously done through paper or triggered manually. We look to implement WorkFlow in the 2016-17 year.
- A Banner Security Analysis Engagement to review our current Banner Security setup was conducted. Banner Security Group usage and fine grain access control are technologies that can now be implemented creating enhanced security in our Banner environment.
- A Blackboard Finance Analytics review was conducted resulting in improved accuracy and reliability in the Finance nightly extract. The Administration and Finance division are now able to use the data and the Finance Analytics Dashboard with confidence.
- The Human Resources Data Mart (HRDM), is another example of technology created in collaboration with the campus Human Resources unit, the Office of Institutional Research and Evaluation, and UNC General Administration. As a result of this system, NCCU no longer produces the Personnel Data File used for governmental reporting. This file is now produced by staff at UNC General Administration from the HRDM.
- UNC General Administration has also worked with campuses to create an interface to store military information for service men, women and their family members in Banner. This information,

Stats and Activities

System Availability of at least 99.8% for 2015-2016 Academic Year

Webserver 99.9% uptime

Wired Network: over 8000 devices (computers, phones, registers, readers, cameras) connected

356 total SharePoint sites used by over 771 students, faculty and staff

160,000 on average emails/day sent to faculty, staff and students 25% of automatically classified as spam or malware

Distributed 680 Microsoft Office licenses to students, faculty, staff

Added discounted Lojack theft prevention license to services offered

captured on the application, is required for governmental reporting purposes and is now loaded automatically. This has eliminated the need to manually enter the data in the system.

- A redesigned SAT by the College Board necessitated changes to an integration application. The file format was changed to accommodate SAT scores in the old and new formats. The team worked with the Office of Undergraduate Admissions to implement the needed changes. Both old and new SAT scores are now being captured and loaded into Banner.

- Satisfactory Academic Progress (SAP) data, needed by the Office of Scholarships and Student Aid to determine aid eligibility is now automatically being calculated for undergraduate, graduate and professional enrolled students. Program modifications have been implemented to capture and use the SAP Standards correctly to ensure that students receive the appropriate SAP code. Finally, automation eliminating IT intervention completes this project for added efficiencies.

Networks and Systems

Maintain availability of 99.8% for critical applications and systems, excluding planned maintenance windows

ITS staff adhered to several best practice design and maintenance procedures to ensure that the campus network and critical applications that rely on the network such as Banner ERP and Exchange email services were available for an uptime of at least 99.8% for the 2015-2016 academic year. The availability of these core resources is critical in support of the mission of the University. 99.8% uptime provides that, outside of advertised maintenance windows, services are unavailable for a period of less than 18 hours during the year.

Complete communication system installation and training

ITS replaced the University's existing obsolete voice system with a new state-of-the-art, VoIP-based communications system. In doing so, the University will recognize overall communications savings in excess of $500,000 annually. Student Affairs/Residential Life recovered almost half of these savings with their strategic decision to remove under-utilized analog phone line services within the residence hall rooms.

As part of the communications system project, the ITS team deployed over 1,900 new telephone sets in faculty and staff offices across the campus. In addition to basic calling features, the new communications system has enabled no-cost domestic long distance dialing, conference calling and unified messaging. Additionally, enhanced collaboration and mobility features such as software-based phones, instant messaging and presence

Students & Classrooms

Students: Closed 1219 tickets at the Eagle Technology Center for student services

Students: Added Saturday hours in the Library to support students

Classrooms: Upgraded five technology enhanced classrooms

Network: Increased bandwidth from 1Gbps to 10Gpbs.

Wireless Network: 1227 access points hosting an average of 5100 devices daily

Received $16,887 video wall from Dell for the Shepard Library Commons

Received $10,000 Google Community Leaders Program Sponsorship to create opportunities for 15 students

are being implemented. Video conferencing capabilities were also made available to all employees and students using the Cisco WebEx platform.

Web Services

Maintain availability of 99.8% for critical applications and systems, excluding planned maintenance windows

During the 2015-2016 academic year, Web Services maintained an average uptime of 99.9% for NCCU.edu. Keeping the web server up and functioning allows students to access academic resources on demand.

Complete NCCU Mobile

Web Services, working with campus and vendor partners, developed the NCCU mobile application, which is scheduled to launch in the Google Play and iTunes stores August 2016.

This mobile application offers students the ability to register for classes, view class schedules, monitor accounts, pay bills, receive push notifications, and access campus information directly from handheld device.

Achieve and Maintain Compliance with Quality Assurance, Search Engine Optimization (SEO), Accessibility, and Security

Since November 2015, Web Services reduced the number of pages with SEO errors from 523 down to 236. The majority of the effort was focused on eliminating pages with duplicate titles, which dropped from 499 to 123. By reducing duplicate page titles, students will find site search more productive.

Scholarship App

During the spring semester, Web Services worked closely with the department of Scholarships and Student Aid in an effort to provide additional features for both current students and administration. These new features include:

- Pre-fill an online application with student data pulled directly from Banner.
- Filter eligible scholarships based on the student's GPA, major, and state.
- Provide an electronic "Thank You" letter that allows approved students to correspond directly with Donors.

Scholarship Application

557 Completed Applications

NO incomplete applications

Increased expended endowed scholarships from 82% to 90%

"You all have made tremendous strides in aligning and enhancing the Scholarship Awards and Donor Recognition process by way of maximizing the use of technology that will ensure recipients and donors are linked and acknowledged."

~ Dr. Harriet Davis, Vice Chancellor

As a result of these improvements, students completed more applications, decreased the number of incomplete applications, and strengthened the percentage of expended endowed scholarships over the results of previous years.

ITS Project Management

Realizing the need to manage projects with a level of true Eagle Excellence, project management software was purchased. This software gives ITS the ability to manage resources more efficiently, allowing for better prioritization and service for the campus. More importantly, this software provides the ability to be transparent with our campus community, provide portfolio based reporting and manage resources to ensure we are able to provide a high level of service at all times. The selected software also replaces the existing ticketing system. With the new ticketing application, the requestor has a better view of their ticket status. This system can also automatically route tickets to the appropriate team member to allow for faster service.

In addition to the many ITS Projects, ITS formed a partnership with School of Business to bring Black Girls Code to the University. We served as the host for two major events, Build-a-Website in a Day and CODE Summer Camp, welcoming over 100 young girls, ages 7-15 collectively, for both events. It is our hope that this will be an ongoing relationship between NCCU and Black Girls Code.

Conclusion

ITS has demonstrated the value of strategic collaborations during the 2015-2016 Academic Year. This Annual Report summarized a few of the many success stories. The work and collaboration that enables student success and organizational efficiencies continues. A few of the initiatives planned for the 2016-2017 Academic Year include:

- implementing Office 365 to provide improved capacity and capabilities for faculty/staff email and collaboration
- evaluating opportunities to create efficiencies through the use of business process improvement and workflow technologies
- collaborating with campus in the development of a reporting/analytics strategy
- developing an IT Strategic Plan and robust governance structure

Eagle Pride Digitized and Eagle Excellence are more than slogans for ITS. They are standards and are embedded in the culture of excellence held by every ITS employee.